

4. Bethany

Program Name: Bethany.java

Input File: bethany.dat

Bethany loves numbers. She is a Number Sense expert. As part of her study, she has memorized the number of factors that each integer from 1 to 100 has. She has also learned various techniques for quickly determining the number of factors for any number.

She wants to see what is in common for integers that have the same number of factors

Write a program that inputs two numbers, N and F. Print the first N integers which have exactly F factors.

Example: If the inputs were 5 and 4, she would want to see the first 5 integers which all have 4 factors. Those numbers would be 6, 8, 10, 14, and 15.

Input: The first line of data will be an integer T in the range [1,20]. T represents the number of data lines to follow. Each line of data will contain two integers N and F. N is an integer in the range [2,20] indicating how many outputs should be created for that data set. F is an integer in the range [2,100]. F represents the factor count for each output for that data set. One space shall separate N and F.

Output: Each test case will produce 1 line of output containing at least 2, but not more than 20 positive integers. Each line will print the first N positive integers which have exactly F factors. There will be one space between each number in each line of outputs.

Sample input:

```
5
10 2
5 6
8 4
2 9
10 8
```

Sample output:

```
2 3 5 7 11 13 17 19 23 29
12 18 20 28 32
6 8 10 14 15 21 22 26
36 100
24 30 40 42 54 56 66 70 78 88
```